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Textual Assessment of Leaders Individual Differences: Exploring TALID

Michael D. Young, Margaret G. Hermann,
and Stephen G. Walker

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Coding Scheme and to Wang Weiguang and Chang Wu,
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Biden and Trump document collections.

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Textual Assessment of Leaders Individual Differences: Exploring TALID

The Textual Assessment of Leader Individual Differences (TALID) is a growing archive of leader speech and a dataset of individual difference scores for more than 750 global leaders.

TALID includes texts accumulated by Social Science Automation, Inc and Margaret G. Hermann during a variety of research projects conducted since 1997. Recent additions to TALID include documents for Joseph Biden and Donald Trump contributed by the Xiamen University Digital Presidents Project. The scores in the data set are all generated using automated coding schemes running on Profiler Plus (Levine & Young, 2014). Variables included in TALID are for Leadership Trait Analysis (LTA) (Hermann M. G., 1980), Operational Code Analysis (OCA) (Walker, Schafer, & Young, 1988), Motive Analysis (MA) (Winter, (1987)), Verbal Behavior Analysis (VBA) (Weintraub, 1989), and Conceptual Integrative Complexity (Suedfeld, Tetlock, & Siegfried, 1992). TALID is available at: <https://www.albany.edu/cehc/research/laiio>. Scores are provided at both the document and leader level.

This document serves as the codebook for the TALID and presents some explorations of how the data might be used. Throughout the document, we assume familiarity with the most popular approaches to assessment at a distance in Foreign Policy Analysis. Readers not familiar with these approaches may wish to review them before proceeding. The final two sections provide notional examples of how TALID data and a new Topics coding scheme (Tsai & Young, forthcoming) could be used to enrich Leadership Trait Analysis and Operational Code Analysis. Any errors or omissions are the responsibility of the first author.

The Contents of TALID

The texts in TALID are currently all English language texts containing material presented in English or translated from another language by human translators. In the future we hope to extend TALID to include texts in other languages, such as Arabic, German, Russian, and Spanish, and to score the texts using existing or forthcoming coding schemes for non-English languages (Canbolat, 2020; Rabini, Dimmroth, Brummer, & Hansel, 2020; Mehvar, 2020; Thiers, 2020; Özdamar, Canbolat, & Young, 2020). A simple overview of TALID is presented in Tables 1-5 below.

Table 1: Fast Facts for TALID

Language of assessment	English
Future languages	Arabic, German, Russian, Spanish, ?
Number of leaders	788
Number of countries	153
Number of words	46,042,406
Number of leaders with $\geq 10,000$ words	533

Table 2: Number of Leaders by Continent

Continent	Number of Leaders
Africa	64
Asia	330
Europe	248
North America	81
Oceania	29
South America	36
Total	788

Table 3: Number of Leaders by State Department Region

Region	Number of Leaders
East Asia and the Pacific	128
Europe and Eurasia	248
Middle East and Northern Africa	174
South and Central Asia	72
Sub-Saharan Africa	49
Western Hemisphere	117
Total	788

Table 4: Number of Leaders by US Command

US Command	Number of Leaders
AFRICOM	55
CENTCOM	182
EUCOM	264
NORTHCOM	60
PACOM	170
SOUTHCOM	57
Total	788

Table 5: Variables in TALID

Variable	Description	Coding Scheme
Author	Name of person who authored and/or presented the coded text in the document	-
Word_Count	Number of coded words in the document	-
Country	Home country of Author	-
Continent	Continental location of County	-
Region	Regional location of County	-
Command	US Command with responsibility for Country	-
BACE	B elief in one's own A bility to C ontrol E vents, scored as IC/(IC+EC)	LTA_Classic
CC	C onceptual C omplexity, scored as HC/(HC+LC)	
DIS	D istrust of Others, scored as HD/(HD+LD)	
IGB	I n- G roup B ias, scored as HB/(HB+LB)	
PWR	Need for P ower and Influence, scored as HP/(HP+LB)	
SC	S elf- C onfidence, scored as HS/(HS+LS)	
TASK	T ask focus, scored as HT/(HT+LT)	

Variable	Description	Coding Scheme
HD	Count of coded words/phrases indicative of high distrust of others	
LD	Count of coded words/phrases indicative of low distrust of others	
HT	Count of coded words/phrases indicative of high task focus	
LT	Count of coded words/phrases indicative of low task focus	
IC	Count of coded words/phrases indicative of internal control	
EC	Count of coded words/phrases indicative of external control	
HB	Count of coded words/phrases indicative of high belief in ability to control events	
LB	Count of coded words/phrases indicative of low belief in ability to control events	
HS	Count of coded words/phrases indicative of high self-confidence	
LS	Count of coded words/phrases indicative of low self-confidence	
HC	Count of coded words/phrases indicative of high conceptual complexity	
LC	Count of coded words/phrases indicative of low conceptual complexity	
HP	Count of coded words/phrases indicative of high need for power	
LP	Count of coded words/phrases indicative of low need for power	
Differentiation	Count of coded words/phrases indicative of differentiation of concepts/objects in the environment	CIC
Integration	Count of coded words/phrases indicative of integration of concepts/objects in the environment	
DIFF-100	Differentiation per 100 words	
INT-100	Integration per 100 words	
nACH	Count of coded words/phrases indicative of need for achievement	nACH
nACH-100	nACH per 100 words	
nAFF	Count of coded words/phrases indicative of need for affiliation	nAFF
nAFF-100	nAFF per 100 words	
nPWR	Count of coded words/phrases indicative of need for power	nPWR
nPWR-100	nPWR per 100 words	

Variable	Description	Coding Scheme
VBA_I	Count of “ I ”	VBA
VBA_We	Count of “ we ”	
VBA_Me	Count of “ me ”	
VBA_DR	Count of coded words/phrases indicative of a direct reference	
VBA_NG	Count of coded words/phrases indicative of negation	
VBA_QU	Count of coded words/phrases indicative of qualification	
VBA_RE	Count of coded words/phrases indicative of retraction	
VBA_AI	Count of coded adverbial intensifiers	
VBA_EX	Count of coded explainers	
VBA_FX	Count of coded words/phrases indicative of feelings	
VBA_EV	Count of coded evaluators	
VBA_RQ	Count of coded rhetorical questions	
VBA_PV	Count of coded words/phrases indicative of passive voice	
self punish	Count of verbs coded as -3 attributed to self	
self threaten	Count of verbs coded as -2 attributed to self	
self oppose	Count of verbs coded as -1 attributed to self	
self appeal	Count of verbs coded as 1 attributed to self	
self promise	Count of verbs coded as 2 attributed to self	
self reward	Count of verbs coded as 3 attributed to self	
other punish	Count of verbs coded as -3 attributed to other	
other threaten	Count of verbs coded as -2 attributed to other	
other oppose	Count of verbs coded as -1 attributed to other	
other appeal	Count of other initiated verbs coded as 1 attributed to other	
other promise	Count of verbs coded as 2 attributed to other	
other reward	Count of verbs coded as 3 attributed to other	
P1	Nature of the Political Universe, scored as % positive other attributions minus % negative other attributions	
P2	Realization of Political Values, scored as the mean intensity of other attributions	
P3	Political Future scored as 1 minus the Index of Qualitative Variation of other attributions	
P4	Control Over Historical Development, scored as Self Attributions divided by (Self Attributions plus Other Attributions)	
P5	Role of Chance, scored as 1 minus (P3 * P4)	

Variable	Description	Coding Scheme
I1	Strategy for Achieving Goals, scored as % Positive Self Attributions minus % Negative Self Attributions.	
I2	Tactics for Achieving Goals, scored as mean of self attributions	
I3	Risk Orientation, scored as 1 minus the Index of Qualitative Variation of self attributions	
I4a	Timing of Cooperation versus Conflict, scored as 1 minus absolute value of (% positive self-attributions minus % negative self-attributions)	
I4b	Timing of Words versus Deeds, scored as 1 minus absolute value of (% verbs coded -1, -2, 1, or 2 minus % verb coded -3 or 3)	

TALID Is Compatible With PsyCL For LTA Data

Comparison of the TALID and PsyCL (Schafer & Lambert, 2022) datasets by author, document date, and word count produces a set of 1,094 matched documents. Running Pearson correlations on variables common to both data sets results in correlations ranging from 0.6763 (I1) to 0.9616 (TASK). Although all the correlations for LTA variables are ≥ 0.93 , indicating essential interchangeability, the lower correlations for the OCA variables suggest caution. The relatively low correlation for I1 is likely due to differences in the coding scheme versions used, especially in the identification of self versus other.

Table 6: Correlations on matched documents for common variables in TALID and PsyCL.

Variable	Pearson Correlation	Count	<i>p</i> -value	R distribution 95% Confidence Limits	
				Lower	Upper
BACE	0.9549	1,093	0.0000	0.9494	0.9598
CC	0.9531	1,094	0.0000	0.9473	0.9582
DIS	0.9607	1,086	0.0000	0.9558	0.9650
IGB	0.9451	1,076	0.0000	0.9383	0.9511
PWR	0.9451	1,093	0.0000	0.9384	0.9511
SC	0.9308	1,080	0.0000	0.9224	0.9383
TASK	0.9616	1,092	0.0000	0.9568	0.9658
I1	0.6763	1,037	0.0000	0.6417	0.7079
P1	0.7876	1,083	0.0000	0.7637	0.8090

Do Leaders Have Central Tendencies For Individual Difference Variables?

One of the fundamental assumptions of leadership analysis in Foreign Polic Analysis is that leaders exhibit stable differences across individual difference measures—leaders have distinct and measurable personalities. The central tendency assumption is supported by research establishing connections between leader mean scores and behavior (Keller, Grant, & Foster, 2020; Foster & Keller, 2023; Young, 2024). Using TALID, we have examined this assumption by looking at the cumulative individual difference scores with the assumption that the scores will stabilize around particular values and that those values will differentiate leaders in significant ways. In Figures 1 to 12 below, cumulative scores for each leader are plotted across all the texts for that leader for a variety of individual difference variables. Our expectation is that after some initial volatility, each leader's scores will stabilize, but that the stabilization value will differ for different leaders. For example, in Figure 1, we can see that scores stabilize after 30-40 thousand words are assessed and that there is a spread of about 15% of the variable range across the leaders. This appears to be a pretty narrow range, but this narrow range is partially an artifact of the scoring formulas which guarantee some regression to the mean, and even small score differences may have important behavioral implications. The primary point is that leaders' scores are stable and differentiated for the individual difference variables.

With the meta-data currently available for TALID we cannot determine if there are stable differences for spontaneous and prepared material. Future versions of TALID will include the meta-data needed to explore this question.

Figure 1: Cumulative LTA PWR scores by leader for 700 leaders.



Figure 2: Cumulative LTA SC scores by leader for 700 leaders.

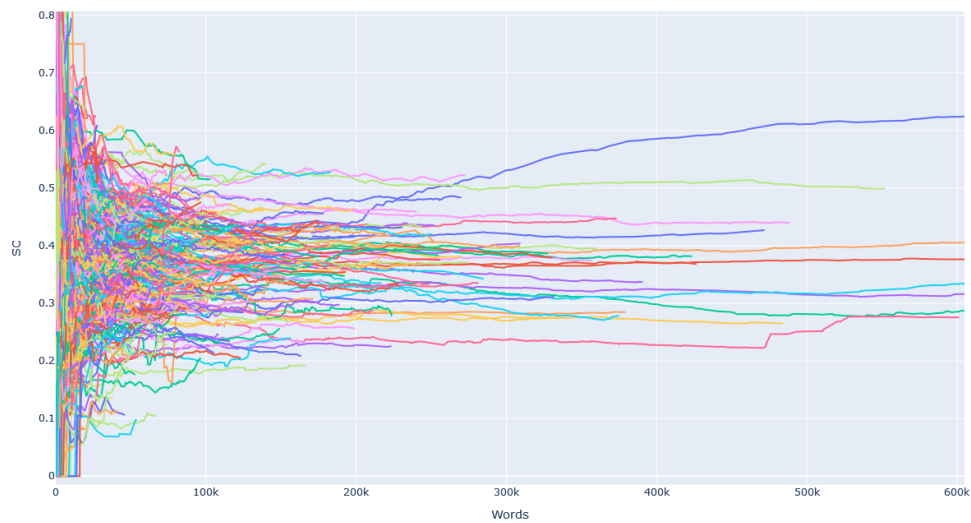


Figure 3: Cumulative LTA TASK scores by leader for 700 leaders.

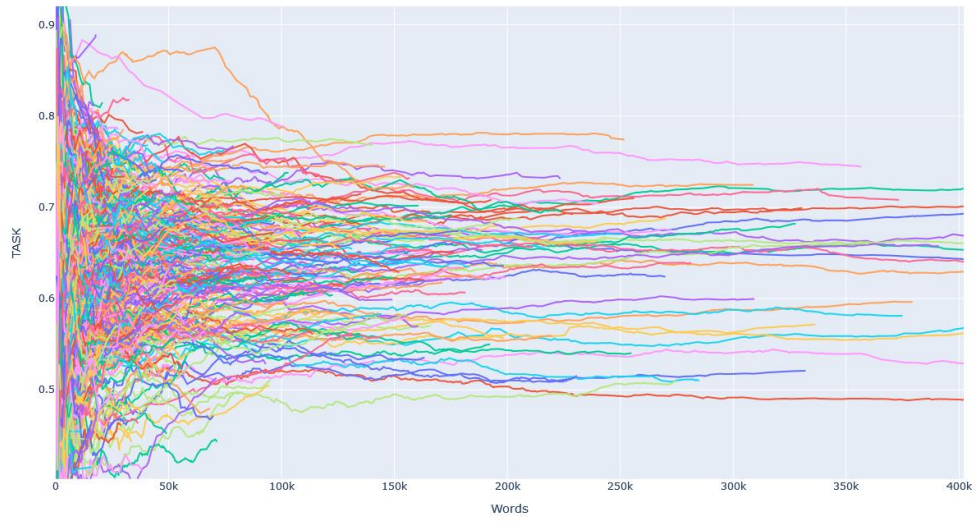


Figure 4: Cumulative Motive nACH-100 scores by leader for 700 leaders.



Figure 5: Cumulative Motive nAFF-100 scores by leader for 700 leaders.

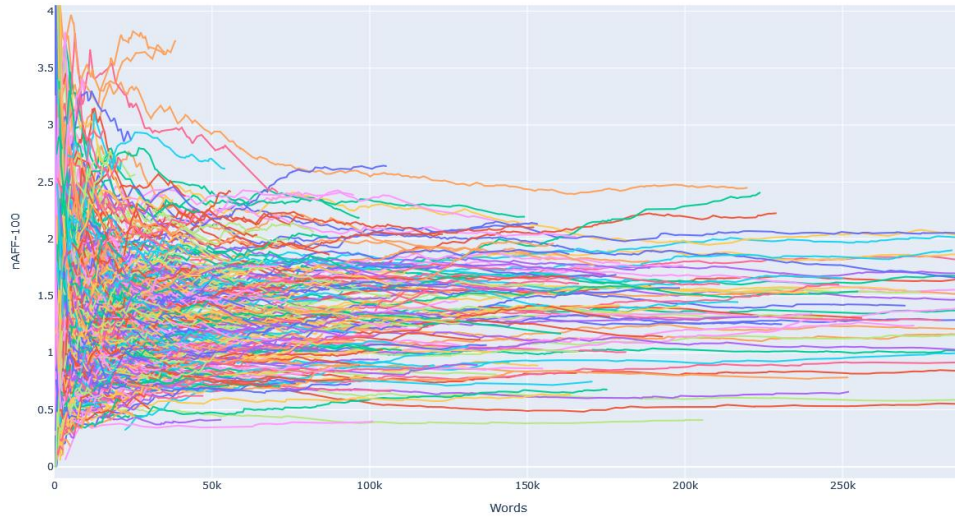


Figure 6: Cumulative Motive nPWR-100 scores by leader for 700 leaders.

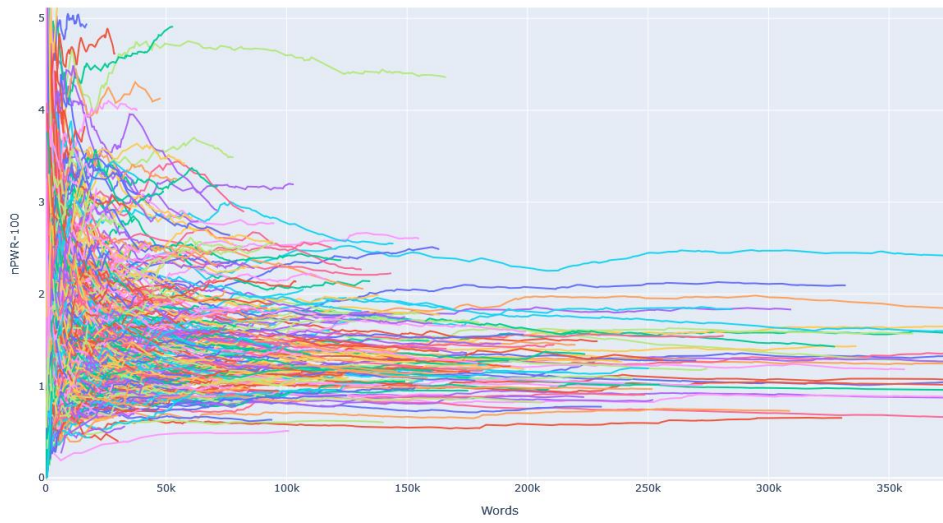


Figure 7: Cumulative OCA I1 scores by leader for 700 leaders.

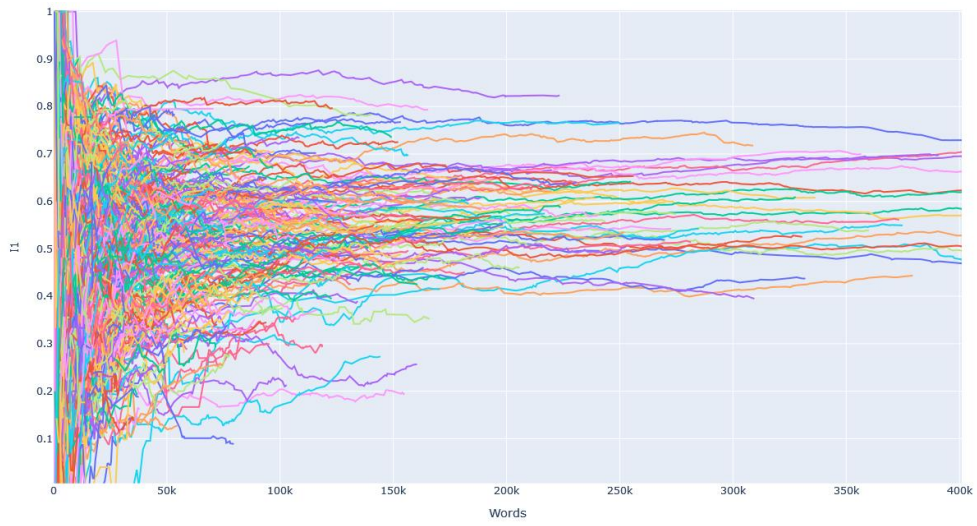


Figure 8: Cumulative OCA P1 scores by leader for 700 leaders.

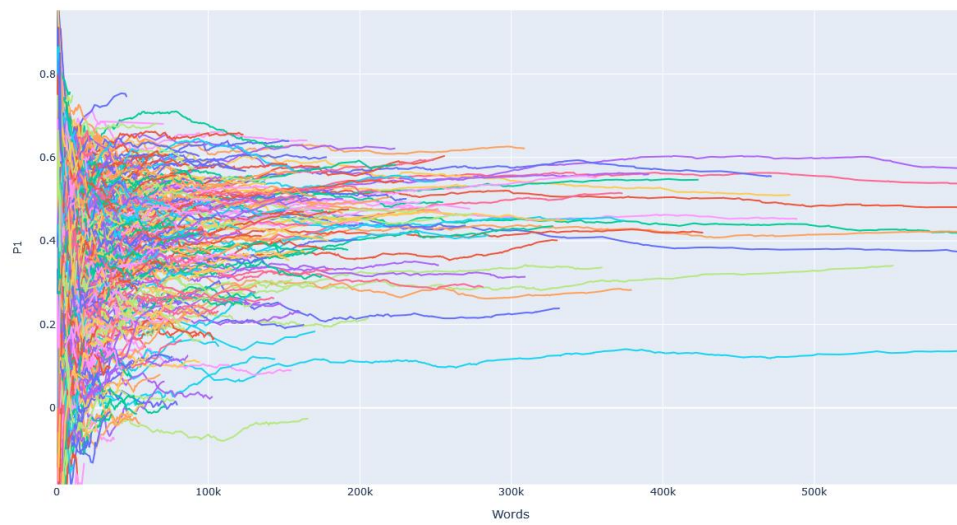


Figure 9: Cumulative LTA IGB scores by leader for 700 leaders.

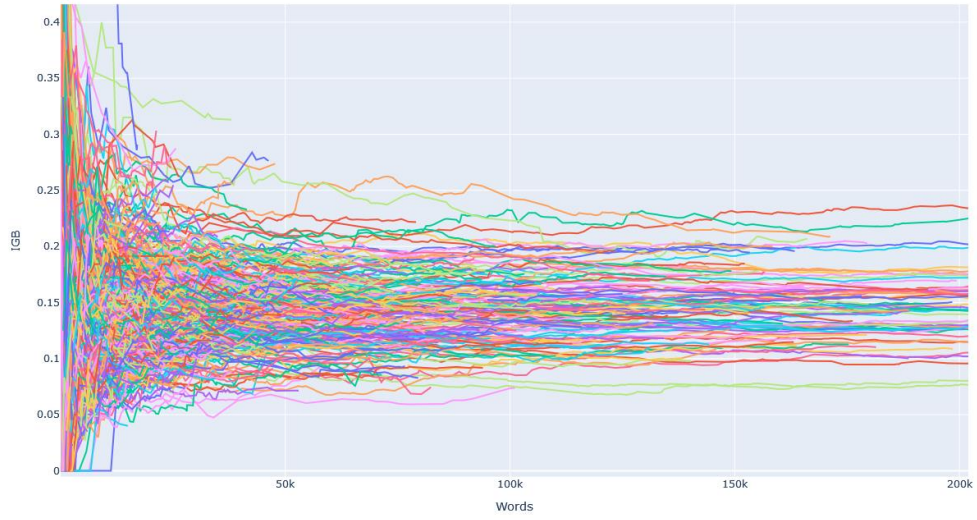


Figure 10: Cumulative LTA BACE scores by leader for 700 leaders.

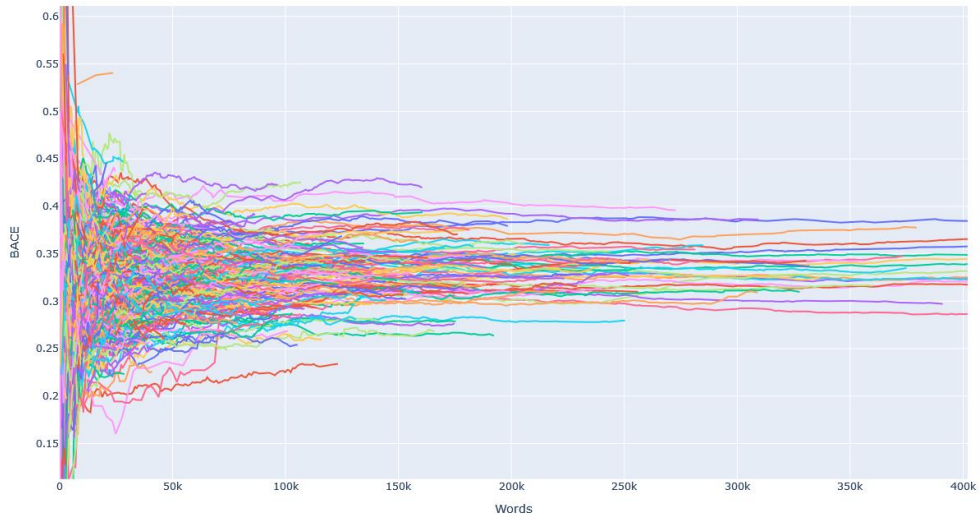
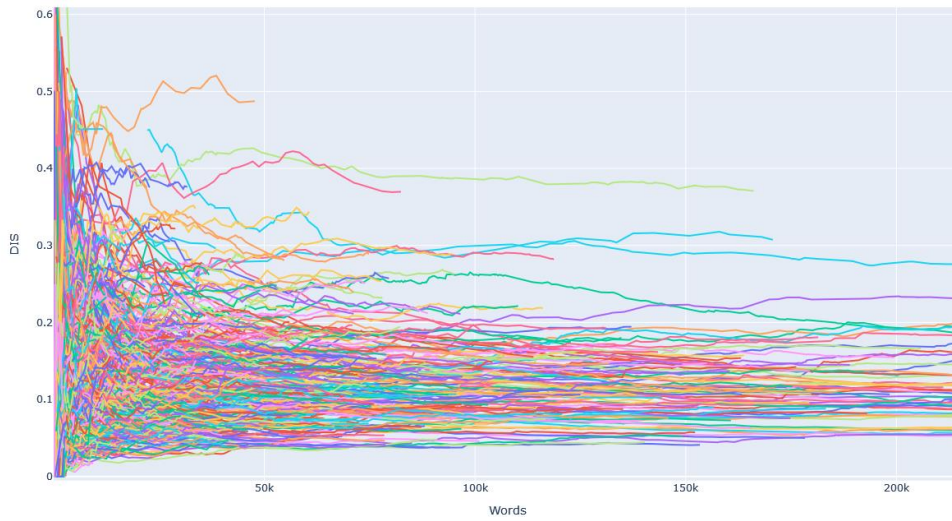


Figure 11: Cumulative LTA CC scores by leader for 700 leaders.



Figure 12: Cumulative LTA DIS scores by leader for 700 leaders.



How Much Data Do You Need For Central Tendencies To Emerge?

Although the developers of assessment at a distance approaches have recommended volumes of material for “adequate” overall leader profiles (Hermann M. G., 1999; Hermann M. G., 2008; Hermann M. G., 2003; Schafer & Walker, 2006) these recommendations are not supported by evidence. This is largely due to the recommendations’ origins during the period when texts were hand scored for individual difference variables and data was commensurately expensive. TALID provides an opportunity to examine this issue empirically. The previous section provides evidence that leaders do have relatively stable central tendencies for individual difference variables and that same data can inform the data requirements for an accurate overall leader profile. We could use Figures 1-12 to estimate the volume of data where the plotted lines flatten, indicating that the score is approaching the central tendency. A somewhat more precise approach is to examine the standard deviation of a rolling window of cumulative scores from Figures 1-12; as the central tendency is approached, the standard deviation of a window of cumulative scores should decline and approach 0. We can thus determine the data requirements for reaching the point where all (or some selected proportion) of the standard deviations are, and remain, below a desired threshold. Figures 14 to 34 provide those plots by cumulative observations (similar plots by the number of words have been omitted for space). Using the two sets of plots researchers can select a confidence level they are comfortable with and then determine the words or observations required for that level of confidence. Table 7 (below Figure 23) provides estimates for some variables using quite small standard deviations that would result in profiles with a high resolution in terms of the leaders’ central tendencies.

Figure 13: LTA SC standard deviations by cumulative observations using a window of 5 documents for 700 leaders.

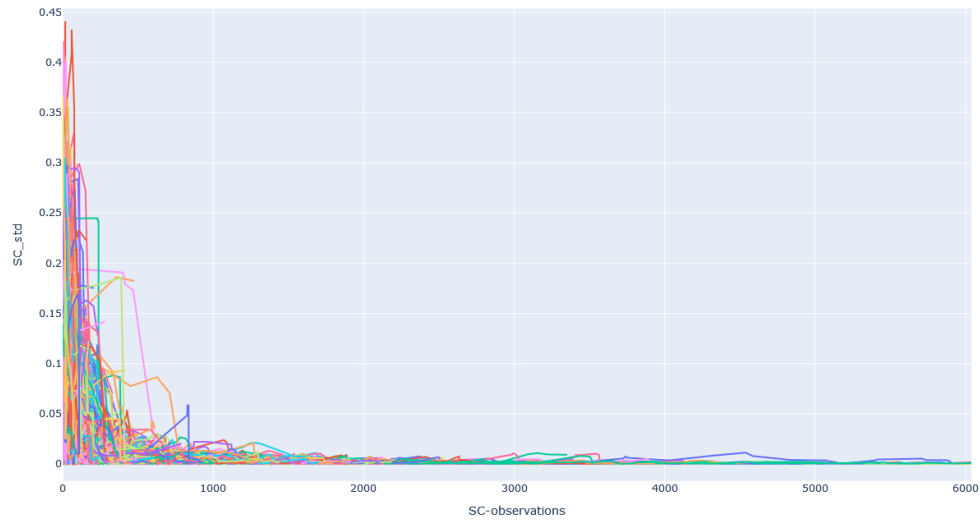


Figure 14: LTA TASK standard deviations by cumulative observations using a window of 5 documents for 700 leaders.

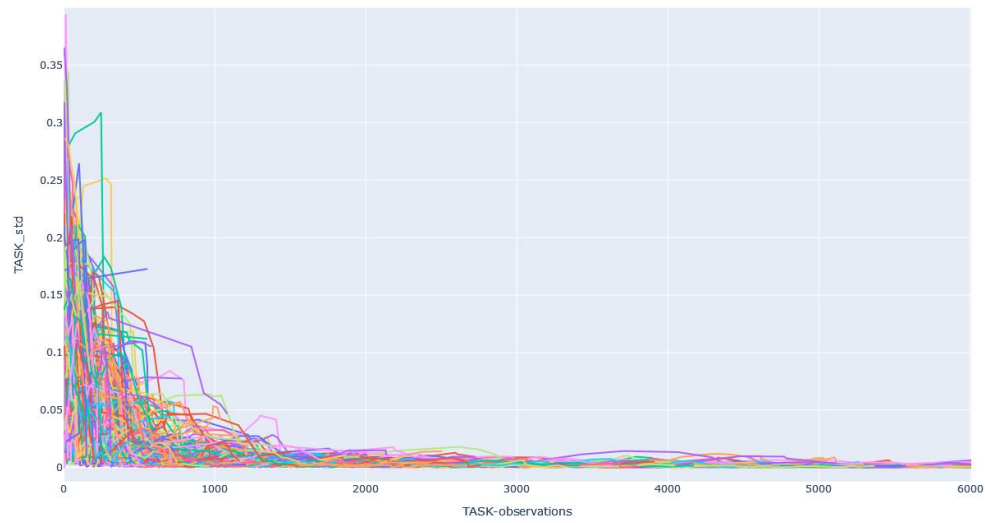


Figure 15: nACH-100 standard deviations by cumulative observations using a window of 5 documents for 700 leaders.

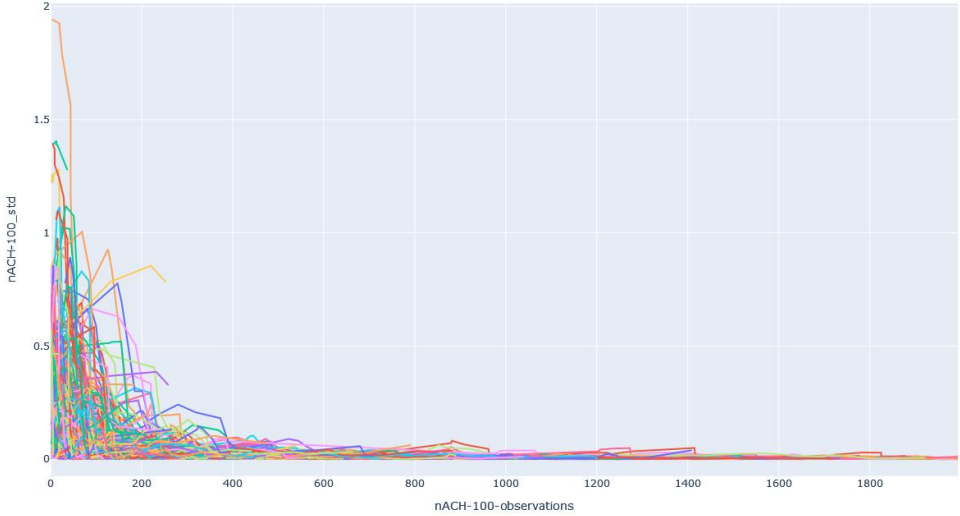


Figure 16: nAFF-100 standard deviations by cumulative observations using a window of 5 documents for 700 leaders.

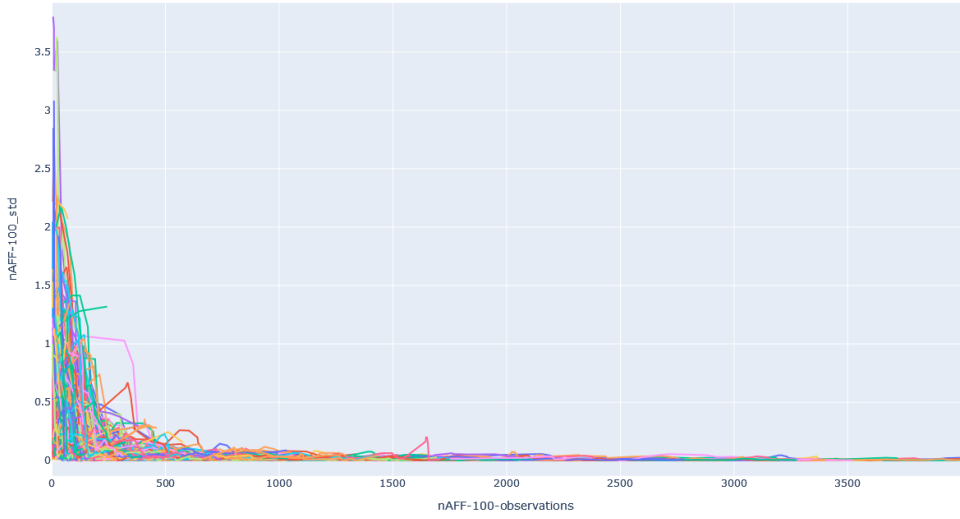


Figure 17: nPWR-100 standard deviations by cumulative observations using a window of 5 documents for 700 leaders.

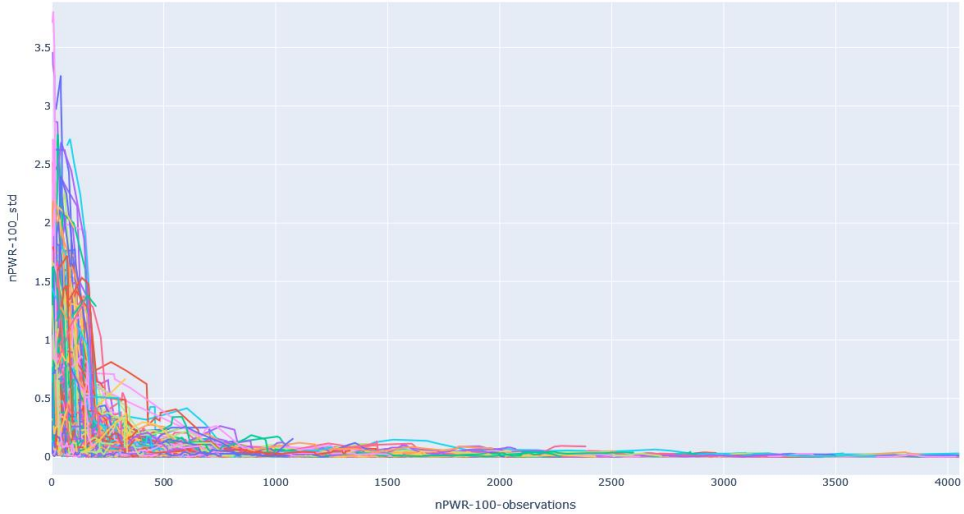


Figure 18: OCA I1 standard deviations by cumulative observations using a window of 5 documents for 700 leaders.

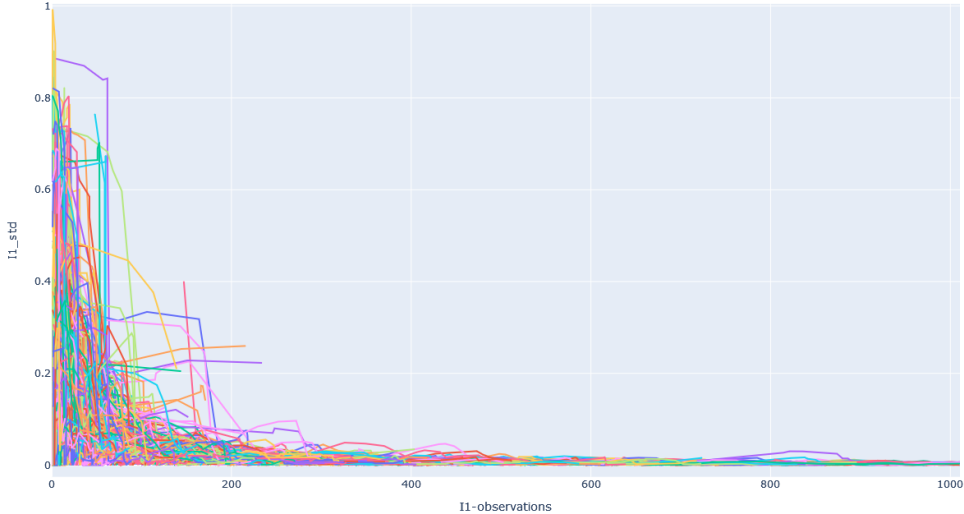


Figure 19: OCA P1 standard deviations by cumulative observations using a window of 5 documents for 700 leaders.

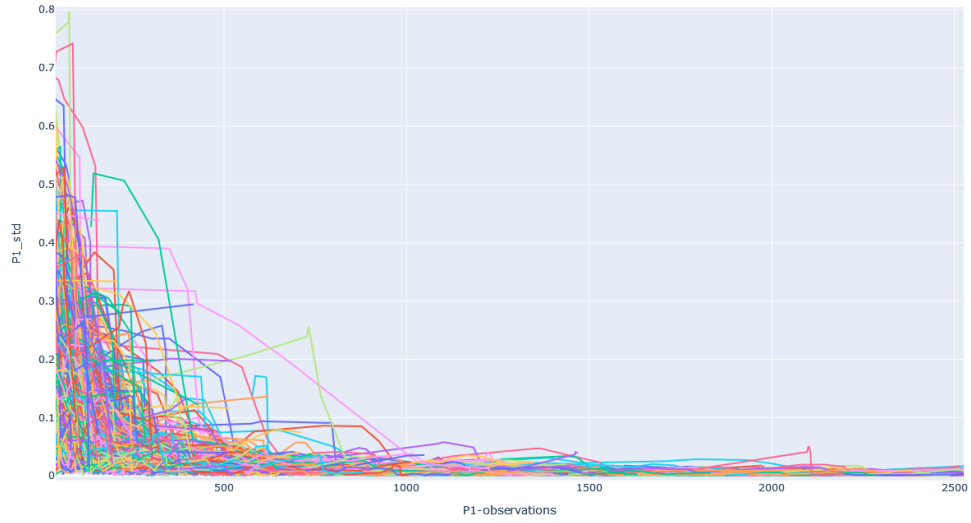


Figure 20: LTA BACE standard deviations by cumulative observations using a window of 5 documents for 700 leaders.

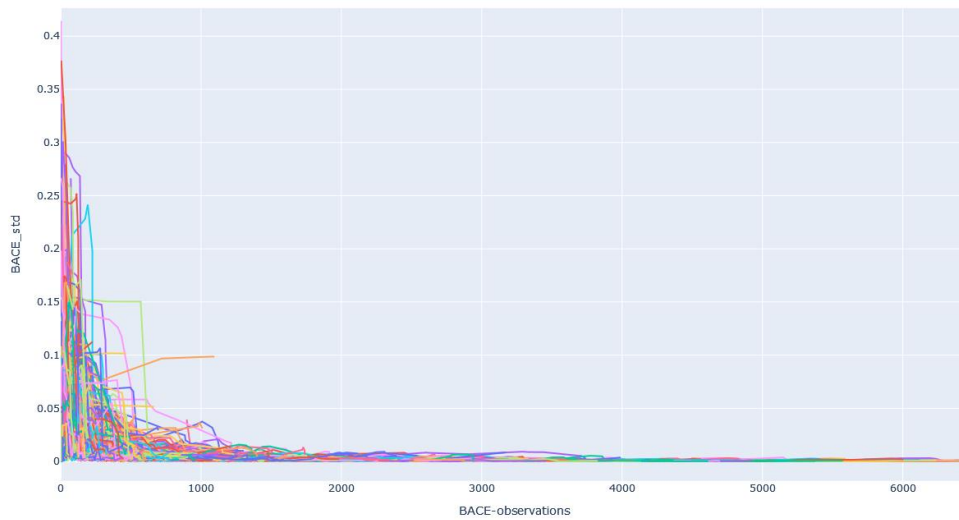


Figure 21: LTA CC standard deviations by cumulative observations using a window of 5 documents for 700 leaders.

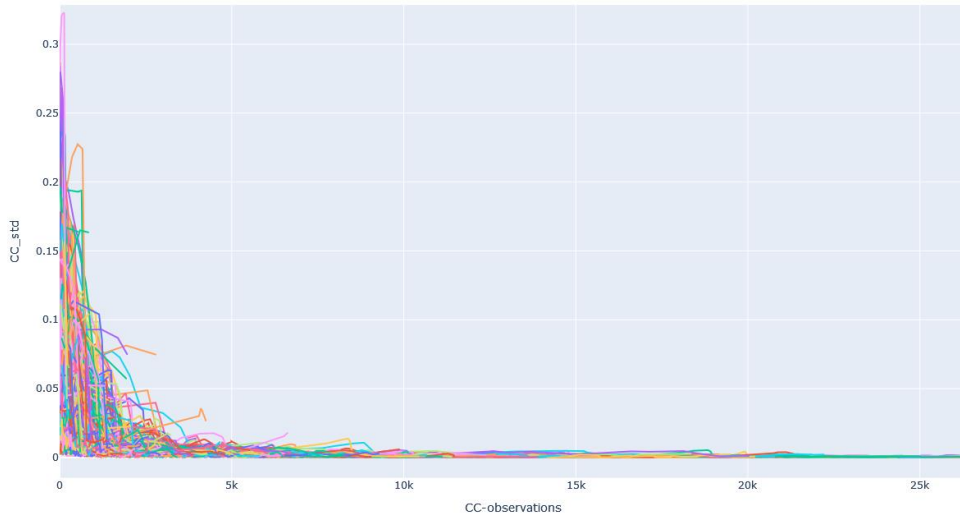


Figure 22: LTA DIS standard deviations by cumulative observations using a window of 5 documents for 700 leaders.

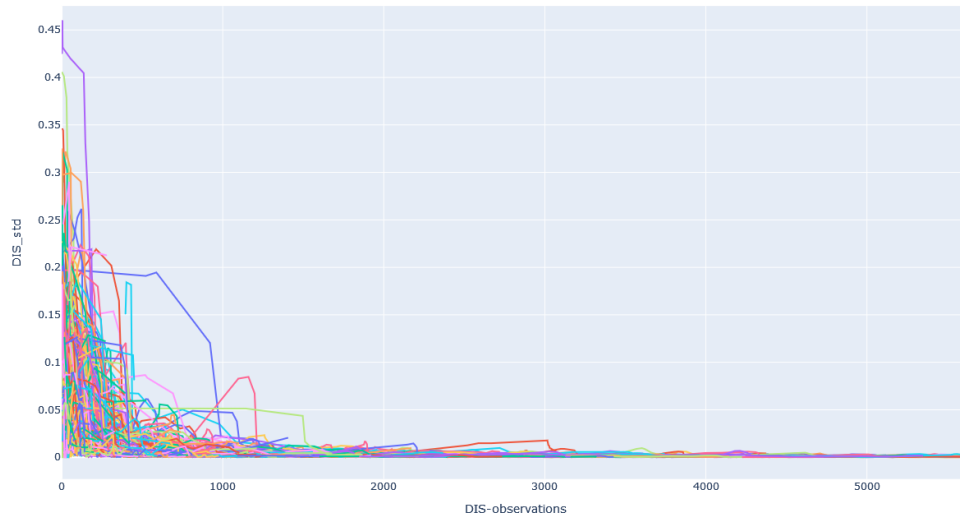


Figure 23: LTA IGB standard deviations by cumulative observations using a window of 5 documents for 700 leaders.

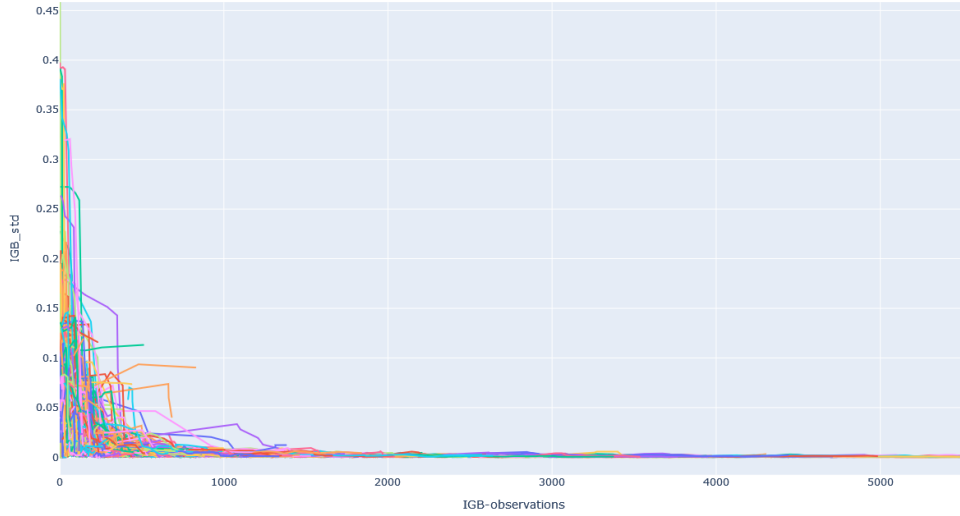


Table 7: Data requirements for identifying central tendencies with specified standard deviations.

Variable (target standard deviation)	Required Number of Words	Required Number of Observations	Overall Standard Deviation by Document	Overall Standard Deviation by Leader
BACE ($\sigma \leq 0.01$)	~81,000	~1,800	0.1827951	0.0395456
CC ($\sigma \leq 0.01$)	~86,000	~9,000	0.1547526	0.05072701
DIS ($\sigma \leq 0.01$)	~40,000	~3,100	0.1665084	0.06972397
IGB ($\sigma \leq 0.01$)	~80,000	~1,400	0.1580618	0.03892719
PWR ($\sigma \leq 0.01$)	~80,000	~2,600	0.1774736	0.03894783
SC ($\sigma \leq 0.01$)	~125,000	~1,800	0.2602332	0.09548721
TASK ($\sigma \leq 0.01$)	~98,000	~4,700	0.1953024	0.07752516
nACH-100 ($\sigma \leq 0.1$)	~35,000	~400	0.6609718	0.3142704
nAFF-100 ($\sigma \leq 0.1$)	~68,000	~1,700	1.23791	0.4935353
nPWR-100 ($\sigma \leq 0.1$)	~78,000	~1,700	1.387857	0.7267203
II ($\sigma \leq 0.01$)	~161,000	~300	0.5139697	0.1556473
PI ($\sigma \leq 0.01$)	~170,000	~4,000	0.4121775	0.1748802

We hypothesize that the relative number of words required mainly reflects density of observations in text, while the relative number of observations required reflects volatility or sensitivity to context.

How Stable Is Relatively Stable?

Readers with a keen eye for detail, may have noticed an anomaly in Figure 2 (LTA SC for 700 Leaders) where one of the blue lines is much less stable than the other lines. This raises several questions: Are all leaders equally stable? Do scores change in different contexts? Do scores change over time? The errant blue line belongs to Tony Blair. Figures Figure 24 to Figure 35 show Tony Blair's scores for each document (dark blue dots), cumulative (royal blue line), and as a moving average of 20 documents (dark green line). Comparing the distances between the three sets of scores provides a visual indication of the stability of the score. The general expectation is for wide variation in document scores, an increasingly stable cumulative score, and a moving average score that stays close to the cumulative score while moving above and below it within the wider spread of the document scores. Comparing variation across variables provides an indication of relative volatility.

In Figure 24, the expectation of an increasingly stable cumulative score is clearly violated as the score begins to rise at approximately 2,500 observations and then increases steadily across the plot. Figures 25 to 35 more closely conform to expectations, although Figure 31 shows an abrupt change in nACH-100 also at approximately 2,500 observations. All the documents are in chronological order, so these changes may correspond to a change in the broader environment, Blair's role, need fulfillment, or learning. This is also an interesting correspondence across two approaches, LTA and Motives. At the end of the plots, change is exaggerated by a reduction in the moving average window down to 5 documents. However, there is still some interesting going on which shows very clearly in Figure 27 (P1), as well as Figures 25 (CC), 28 (I1), and 35 (DIS).

Figure 24: Tony Blair's scores for LTA SC by observations.

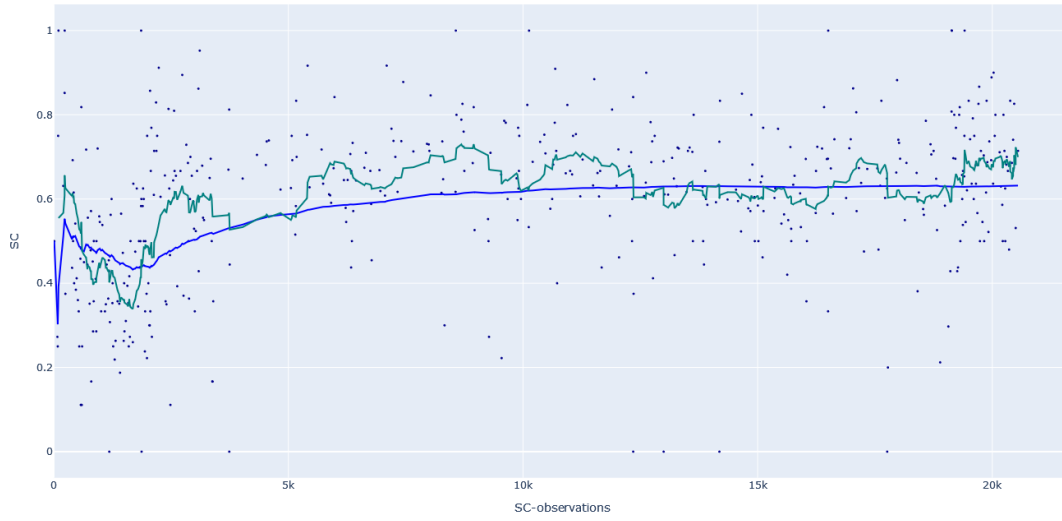


Figure 25: Tony Blair's scores for LTA CC by Observations.

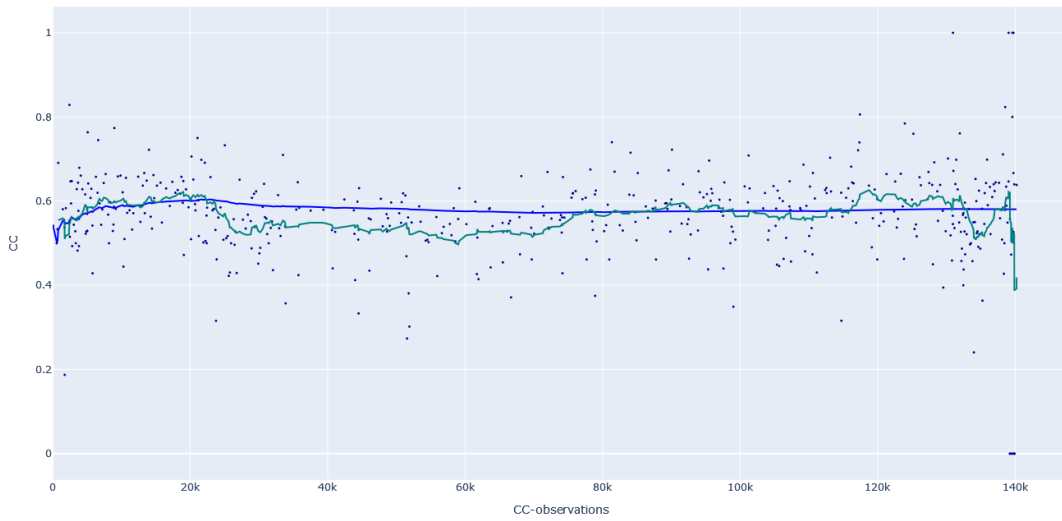


Figure 26: Tony Blair's score for LTA BACE by observations.

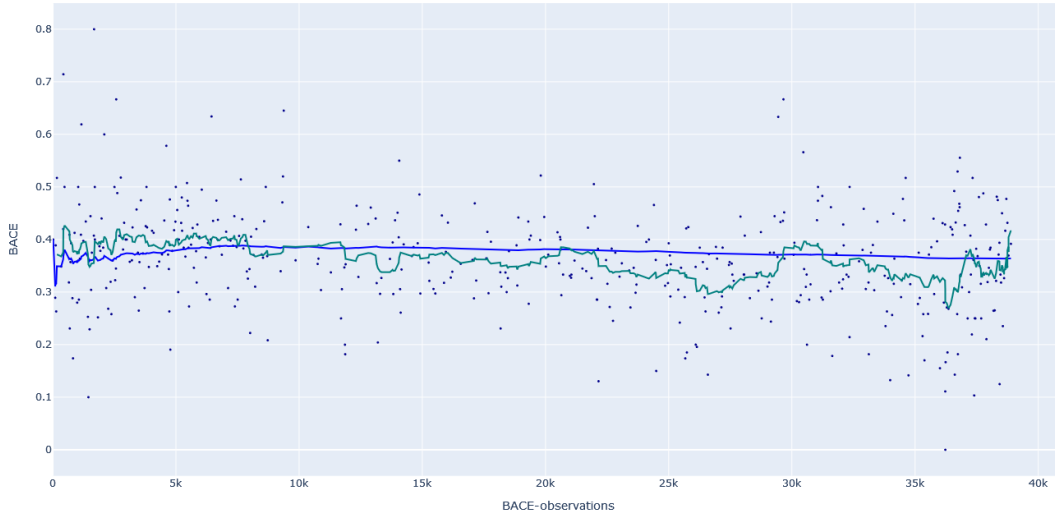


Figure 27: Tony Blair's scores for OCA P1 by observations.

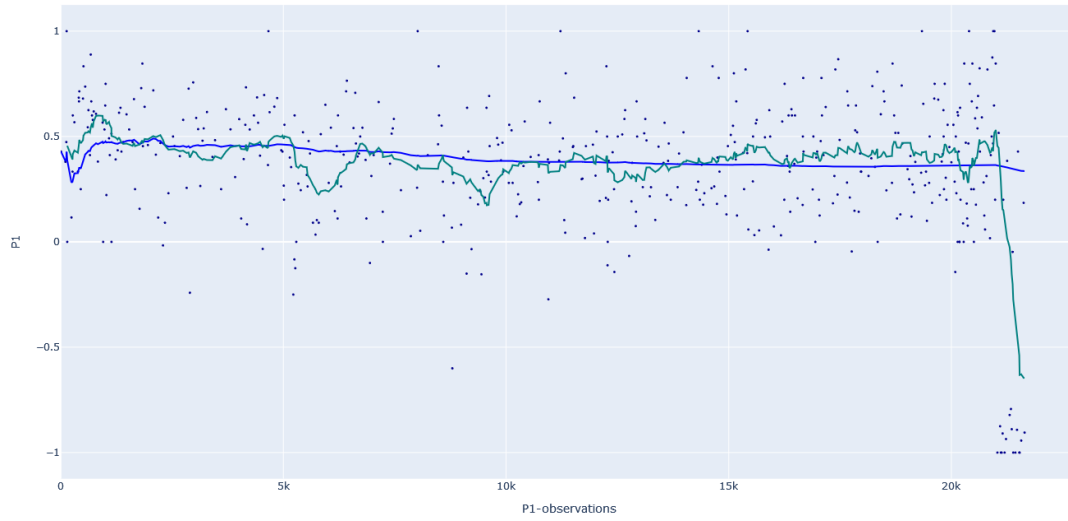


Figure 28: Tony Blair's score for OCA I1 by observations.

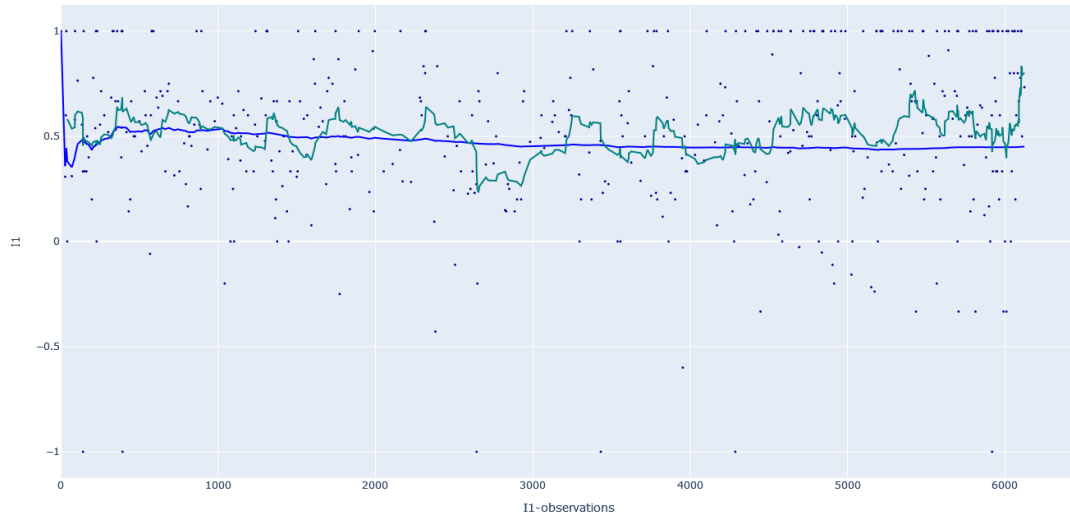


Figure 29: Tony Blair's scores for Motive Analysis nPWR-100 by observations.

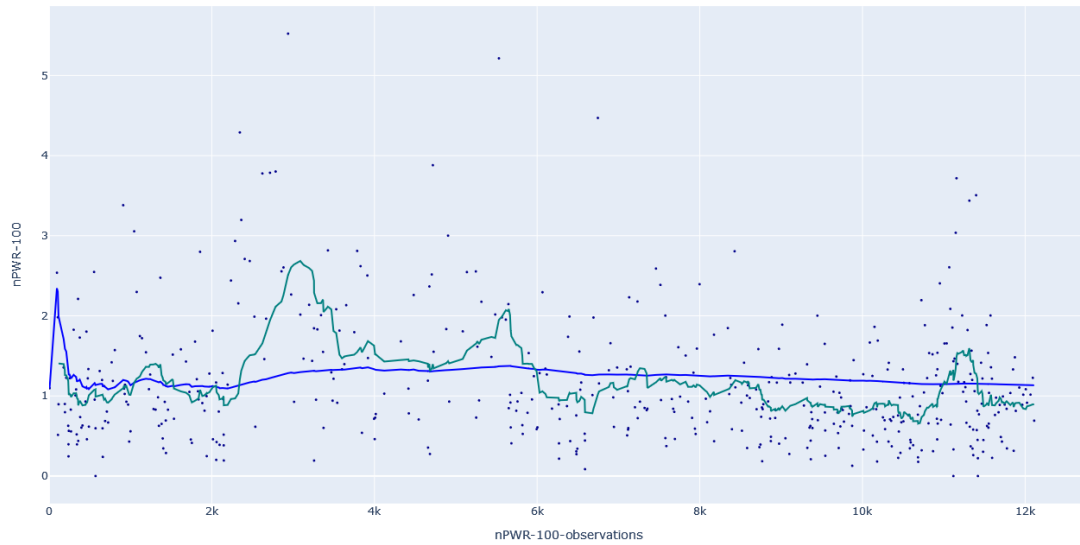


Figure 30: Tony Blair's score for Motives nAFF-100 by words.



Figure 31: Tony Blair's score for Motives nACH-100 by observations.

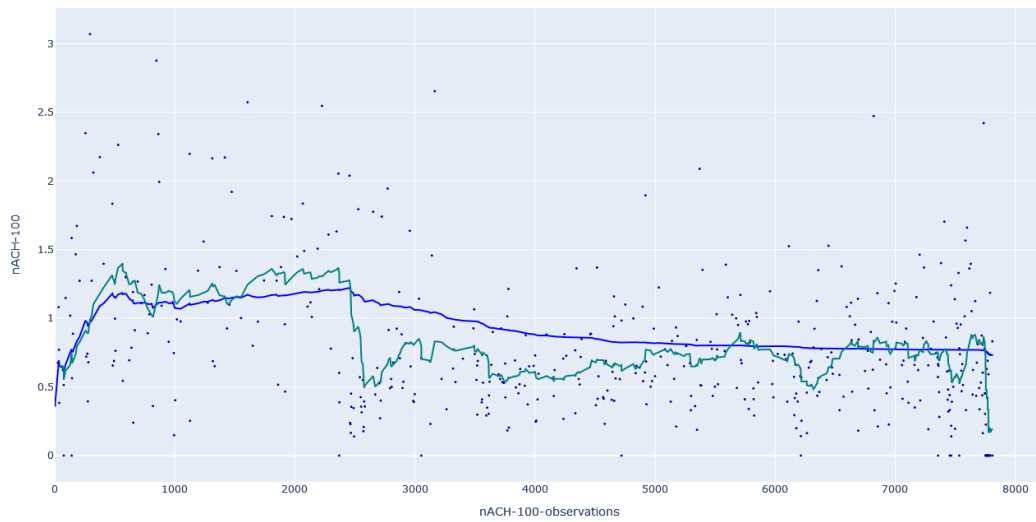


Figure 32: Tony Blair's score for LTA TASK by observations.

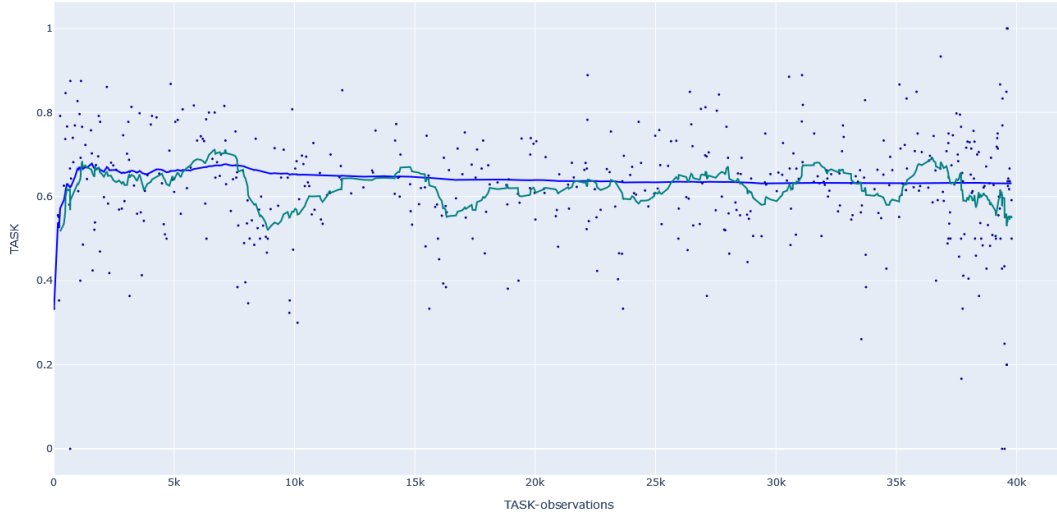


Figure 33: Tony Blair's score for LTA PWR by observations.

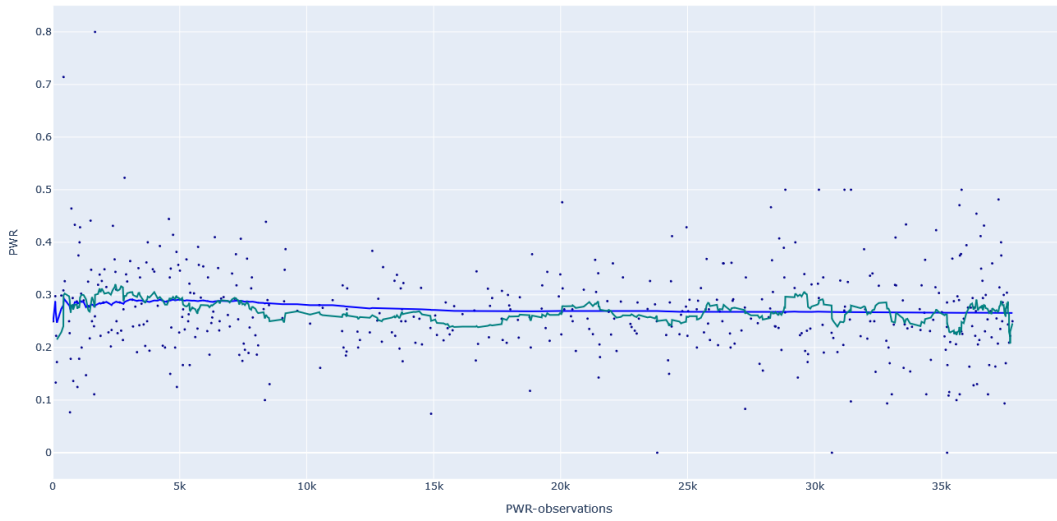


Figure 34: Tony Blair's score for LTA IGB by observations.

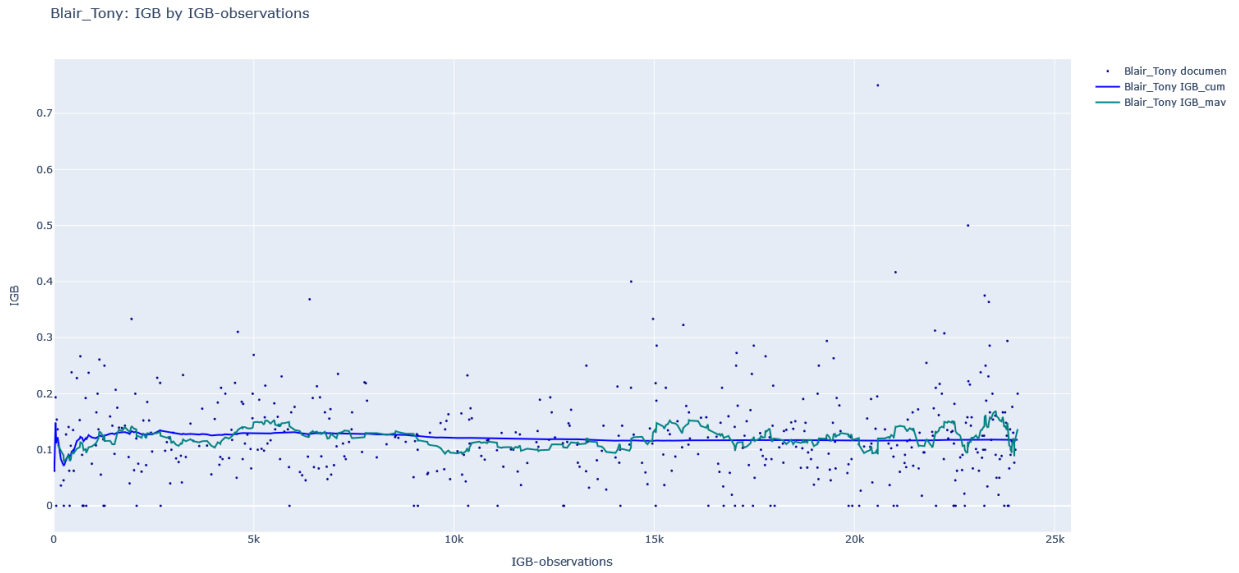
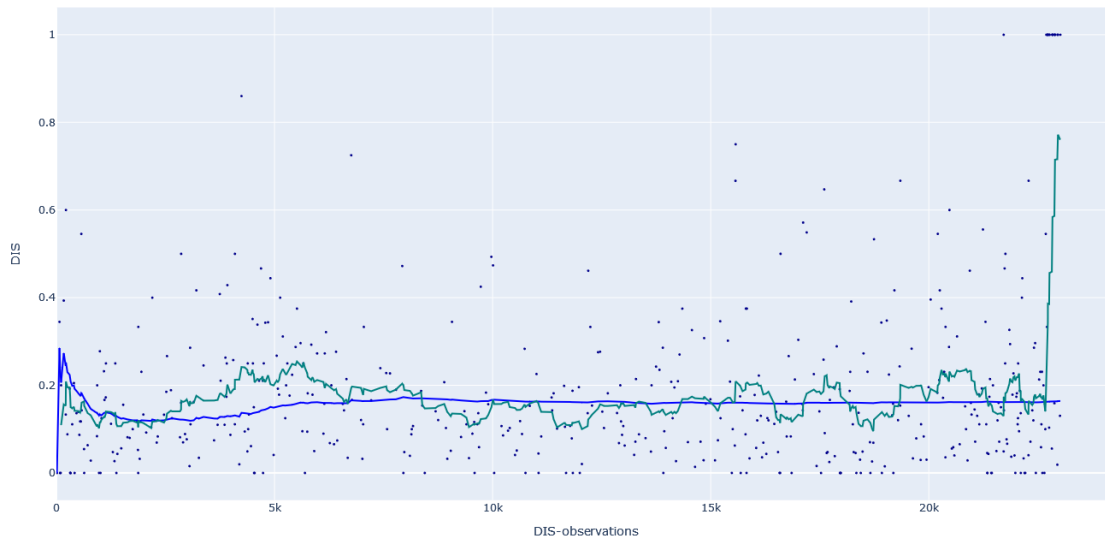


Figure 35: Tony Blair's score for LTA DIS by observations.



Are there Differences by Target?

The assumption that leaders have central tendencies for at least some individual difference scores is compatible with the idea that leaders may exhibit different behavior in different situations—a situational leadership hypothesis (Green, 1977; Zaccaro, 2018). Although we have been supporters of this hypothesis for many years (Hermann M. G., 1983; Young & Schafer, 1998) the expense of generating suitable data has limited research in this area with a few exceptions (Balci & Efe, 2021; Özdamar, Haliştoprak, & Young, 2023). The development of a Topics coding scheme¹ by Tsai and Young (forthcoming) creates an opportunity to explore this question with TALID documents by comparing scores for different countries².

Figure 36: OCA P1 and I1 values for countries with at least 200 observations in documents by Joseph Biden.

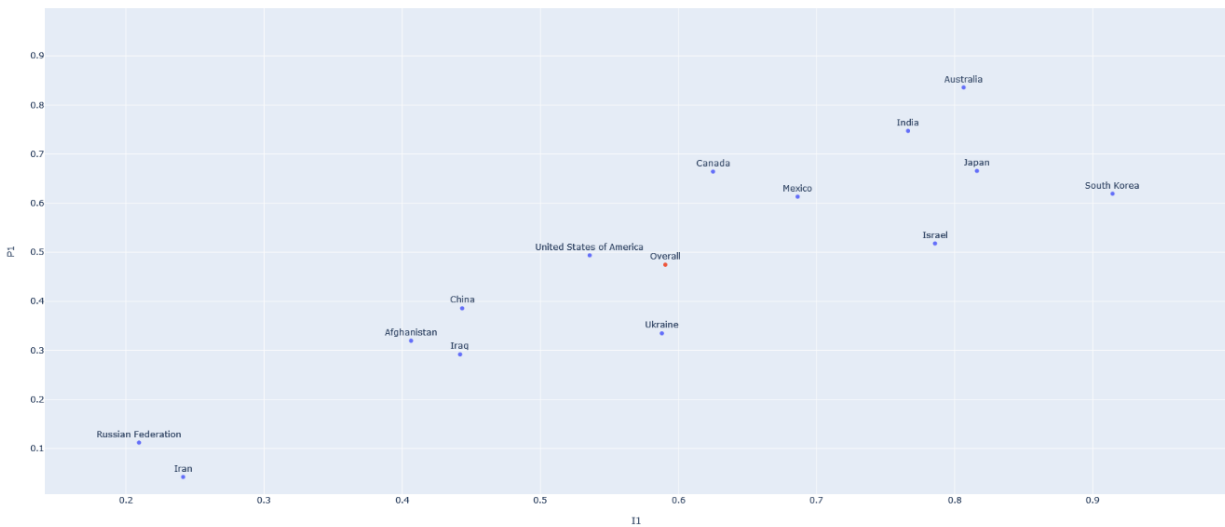


Figure 36 plots the P1 and I1 scores for countries with at least 200 observations in a set of Joseph Biden’s documents from between 2/6/2007 and 9/20/2023. Figure 37 plots the P1 and I1 scores

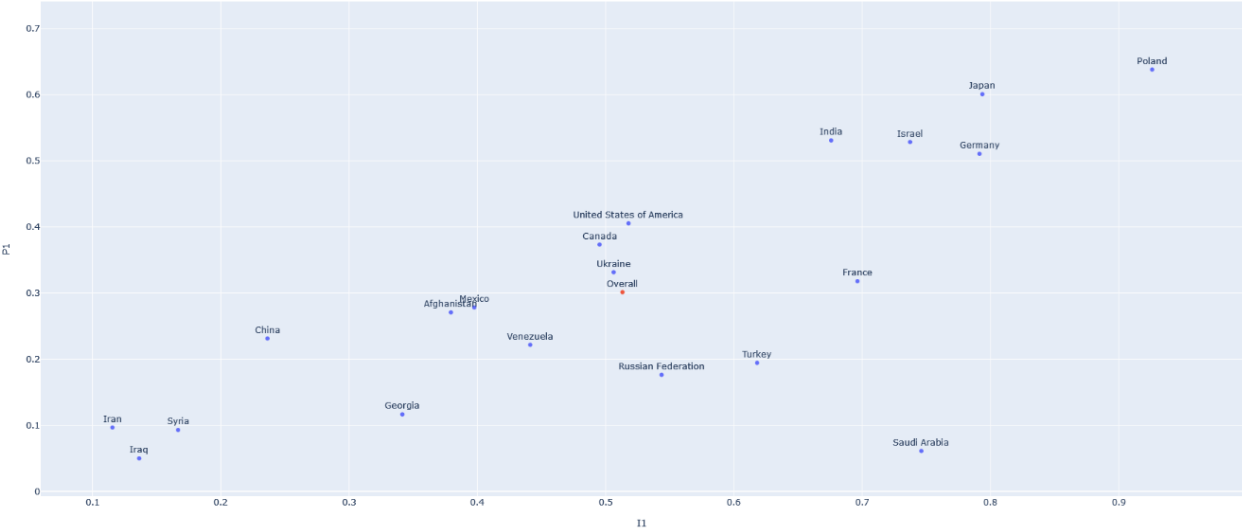
¹ The Topics coding scheme codes for the 21 major U.S. Policy Agendas topics (see https://comparativeagendas.s3.amazonaws.com/codebookfiles/Codebook_PAP_2019.pdf) of the Policy Agendas Project (<https://www.comparativeagendas.net/us>) along with references to global countries and other international actors. Using the scheme for the assessment of individual differences requires the use of compatible coding schemes which will be released on profilerplus.org after the initial publication on the Topics coding scheme.

² Scores for each country are derived from observations for all sentences in which the country is mentioned by name.

for countries with at least 200 observations in a set of Donald Trump’s documents from between 9/16/2015 and 9/16/2023. In this exploration we are interested in the face validity of the plots; do countries fall where we expect them to? In this regard, it is gratifying to see in Figure 36 that the Russian Federation and Iran fall in the lower left part of the plot where less cooperative countries that Biden is less cooperative toward should appear. Also gratifying is the appearance of Australia, India, Japan, and South Korea the upper right where cooperative countries that Biden cooperates with should appear.

Similarly gratifying results are shown in Figure 37 for Donald Trump. Iran, Iraq, and Syria all appear in the lower left while the Russian Federation takes a position low in the center of the plot, indicating that although the Russian Federation is relatively hostile, Trump has a more cooperative attitude toward the Russian Federation than Biden and the inverse is true for Iraq. Also as expected, Mexico is lower to the left for Trump and higher to the right for Biden.

Figure 37: OCA P1 and I1 values for countries with at least 200 observations in documents by Donald Trump.



Differences over time?

Whether individual differences differ by time is another longstanding question in assessment at a distance that remain largely unanswered, although there have been small-N studies (Dille & Young, 2000; Dyson & Parent, 2018; Schafer & Lambert, 2022; Balci & Efe, 2021; Mahdasian, 2002; Suedfeld, Cross, & Brcic, 2011). Figures Figure 38 and Figure 39 present simple illustrations of yearly data for a particular target (the Russian Federation) for both Biden and Trump. Figure 38 shows a great deal of movement over time beginning in 2007 when the Russia Federation is viewed as perhaps slightly uncooperative but is approached with cooperation, to 2020 when the Russian Federation is viewed some cooperative, but is approached with relative conflict, followed by a return to the overall viewpoint in thereafter.

Figure 38: OCA P1 and I1 values for the Russian Federation in Biden’s documents by year.

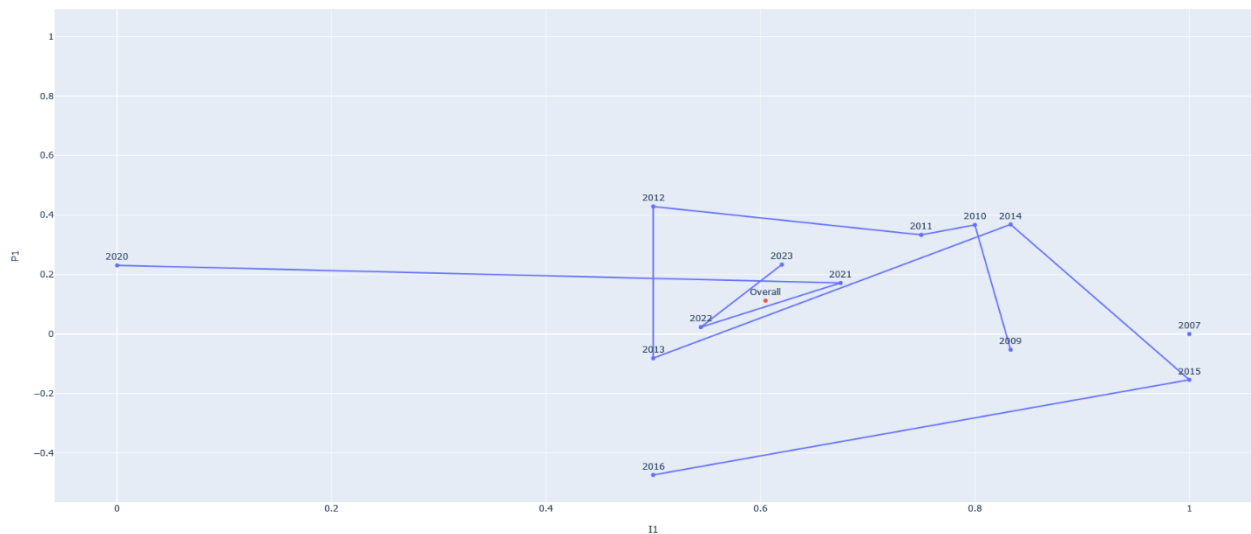
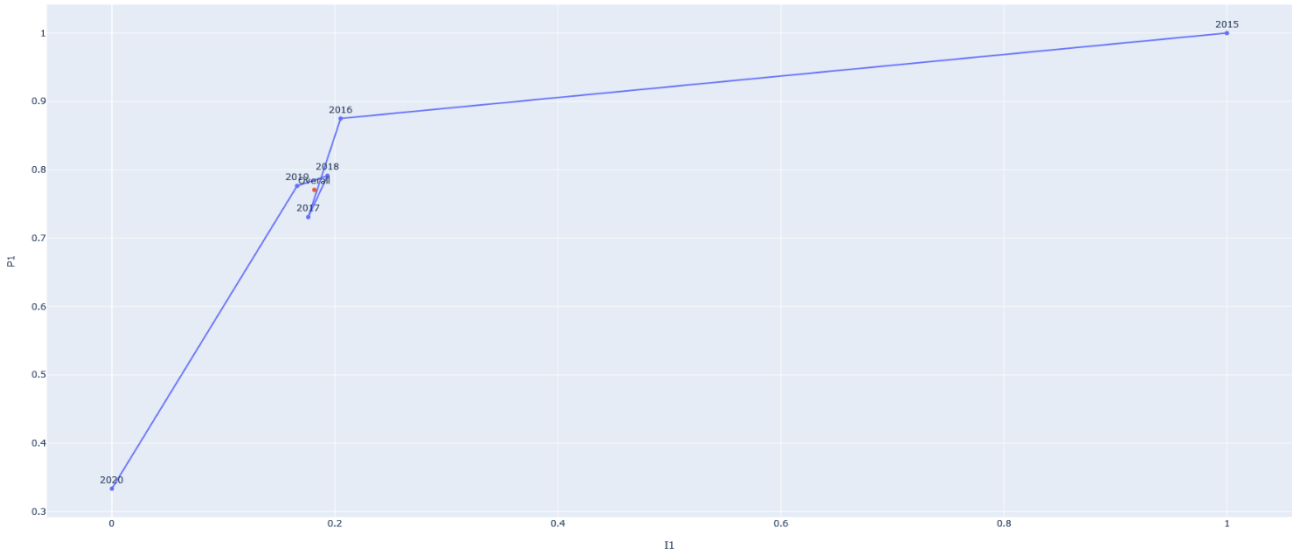


Figure 39 shows Trump’s view of Russia evolving more directly, moving from a cooperative country that should be approached cooperatively in 2015, to a less cooperative country that should be approached much less cooperatively in 2020. We offer this illustration of analysis that

can be conducted, but we leave to the reader a determination of whether this satisfies face validity.

Figure 39: OCA P1 and I1 values for the Russian Federation in Biden’s documents by year.



Using TALID to assess Leadership Style

Margaret G. Hermann

One way that those studying leadership have tried to take into account various aspects of the phenomenon is by exploring leadership style, that is, the way that leaders interact with constituents and those around them in a particular context. Leadership style helps us determine how leaders will structure decision making, from whom they are likely to seek advice, the kinds of contexts they are likely to prefer, and the processes they will usually follow in working toward goals. Historians, journalists, political scientists, and politicians generally use four terms to describe leadership style. They refer to leaders as advocates, strategists, pragmatists, or opportunists. Each is viewed as a unique way of approaching politics and leadership.

In determining leadership style, we use four of the characteristics that are determined through using Leadership Trait Analysis (LTA), that is, belief that one can control events (BACE), need for power (PWR), conceptual complexity (CC), and self-confidence (SC). Which of the four leadership styles is characteristic of a particular leader in a specific context is determined by the answers to two questions. How do leaders deal with organizational constraints and how open are they to contextual information? In other words, do they respect or challenge constraints and do they selectively use information or are they open to it directing their response? How leaders deal with constraints is determined by examining the leader's interest in controlling what happens (BACE) and their need for power and influence over others (PWR). Contextual complexity (CC) and self-confidence (SC) are used to ascertain openness to contextual information. High and low scores are ascertained by comparing a leader's scores to those of a norming group or by using the mean scores for that leader across documents. See Hermann (2008), Hermann and

Gerard (2009), Hermann and Kaarbo (2020), and Hermann and Sakiev (2018) for elaborations of this process.

Leaders with an advocate leadership style have a set of goals, an ideology, a cause, or a problem that they are focused on solving—in effect, an agenda. Movement on this agenda is of paramount importance to such leaders who, in turn, believe their constituents share or should share their priorities. Persons with a strategic leadership style have a set of goals, a cause, or a problem of particular interest but how they go about working on such issues is dependent on what is possible in the particular situation and with relevant constituencies. In other words, their goals are set but the means for achieving such goals vary with the context and what constituents will support—political timing is critical. For the pragmatist, goals are determined by what certain constituencies want and expect in a particular context. The agenda is adaptable to the expectations of these constituencies. The opportunist is the “rational” leader. His or her focus is on what opportunities are available in the current context for maximizing movement toward the political entity’s goals while minimizing losses.

Table 8 and Table 9 show scores for Joe Biden and Donald Trump on the four characteristics that determine leadership style as well as the resulting leadership style directed toward dealing with a number of different countries important to the US at the current point in time as well as their leadership style in discussions of US foreign policy. High and low scores were determined by using the mean scores for each leader across the set of country targets listed in the table. Those means are indicated at the bottom of each table. When the leader’s score fell at the mean, it was assumed that the particular context at a point in time would determine high or low score for that leader—that the problem or activity at the moment would shape that characteristic. The tables cover countries that Biden and Trump discussed 2,500 or more times--for Biden between

2/6/2007 and 9/20/2023 and for Trump 9/16/2015 and 9/16/2023. In reacting to constraints, a high indicates an interest in that way of having influence—for BACE by having control of the situation or event, for PWR by being able to influence the people involved in dealing with what is happening. BACE is situational control, PWR is people control. If both are high, the leader can involve both ways of having influence. Regarding how open or closed the leader is to information, CC focuses on interest in gaining information and SC indicates how secure the leader is with their own ideas and beliefs. The advocate leadership style challenges constraints in a focused and closed manner. The strategic leadership style challenges constraints but does so openly and with an interest in others' points of view. The pragmatic leadership style respects constraints but does so in a relatively closed fashion with a focus on the preferences of a particular constituency or constituencies. And the opportunist respects constraints and is open to all the information that a particular context can yield to facilitate the best decision possible at the moment.

Table 8: Biden Leadership Style by Target Country

Country	BACE	PWR	CC	SC	Style
Afghanistan	0.39 High	0.28 Mean	0.57 Low	0.39 High	Advocate (Secure)
China	0.34 Low	0.23 Low	0.65 High	0.49 High	Opportunist (Secure)
India	0.41 High	0.28 Mean	0.63 High	0,31 Low	Strategist (Insecure)
Iran	0.36 Low	0.31 High	0.60 Mean	0.36 Mean	Context Dependent
Iraq	0.35 Low	0.24 Low	0.57 Low	0.37 High	Pragmatist (Secure)
Israel	0.33 Low	0.28 Low	0.55 Low	0.32 Low	Pragmatist (Insecure)
Japan	0.36 Low	0.28 Mean	0.61 High	0.19 Low	Context Dependent
Russia	0.36 Low	0.30 High	0.64 High	0.41 High	Strategist (Secure)
Ukraine	0.44 High	0.37 High	0.59 Low	0.36 Mean	Advocate (Security is context dependent)
USA	0.41 High	0.25 Low	0.55 Low	0.39 High	Advocate (Secure)
Biden Means	0.38	0.28	0.60	0.36	

Table 9: Trump Leadership Style by Target Country

Country	BACE	PWR	CC	SC	STYLE
Afghanistan	0.38 Low	0.25 Low	0.63 High	0.30 Low	Opportunist (Insecure)
Canada	0.44 High	0.25 Low	0.67 High	0.37 Low	Strategist (Insecure)
China	0.48 High	0.31 High	0.68 High	0.43 High	Strategist (Secure)
Germany	0.39 Low	0.26 Low	0.72 High	0.45 High	Opportunist (Secure)
Iran	0.36 Low	0.24 Low	0.64 High	0.41 High	Opportunist (Secure)
Iraq	0.42 High	0.25 Low	0.60 Low	0.31 Low	Advocate (Insecure)
Israel	0.40 Low	0.30 High	0.53 Low	0.35 Low	Advocate (Insecure)
Japan	0.39 Low	0.24 Low	0.58 Low	0.36 Low	Pragmatist (Insecure)
Mexico	0.45 High	0.25 Low	0.66 High	0.33 Low	Strategist (Insecure)
Russia	0.45 Low	0.29 High	0.63 High	0.54 High	Strategist (Secure)
Syria	0.45 High	0.31 High	0.65 High	0.40 High	Strategist (Secure)
Ukraine	0.37 Low	0.24 Low	0.56 Low	0.46 High	Pragmatic (Secure)
USA	0.45 High	0.31 High	0.55 Low	0.33 Low	Advocate (Insecure)
Trump Means	0.41	0.27	0.62	0.39	

The tables show that both Biden and Trump exhibit all four leadership styles. Given the time frame being covered by these data, these leadership styles represent predispositions to act in a particular way. Indeed, Biden shows a number of places where his score is the mean for that characteristic suggesting that he can be high or low depending on what is going on in the context. Note that even his predisposition is context dependent for Iran and Japan. His foreign policy experience may be having an effect. Given these data cross Biden's time in the Vice Presidency and Presidency, it would be important now to break the scores down by position, particularly for

these two countries. Trump's styles are more well-defined and for five target countries, he evidences a strategic leadership style. He knows what he would like his policy toward them to be but seeks out information in order to determine the circumstances under which he can do what he wants. Interestingly, although Trump appears to know what he wants, his scores on self-confidence suggest that he is more insecure than secure in this knowledge.

Of interest in this paper are the two leaders' leadership styles toward China and Russia. The only time Biden exhibits an opportunistic leadership style is toward China. Here he respects the constraints he views that Chinese policy creates for the US and he is interested in gathering information right now to see what the US can gain or lose in this instance and to head toward maximizing what the US can gain and minimizing any losses. It is right now that is important. With regard to Russia, Biden is more strategic. Here he knows what he wants the US position to be and he works to influence those who are critical to it happening while remaining aware of the environment and those who could impede what he would like to see happen. But he exudes confidence in order to facilitate selling what he is planning to do. At issue is when is the opportune moment and who needs input.

Trump is strategic toward both China and Russia. The big difference between his responses in the two cases is that with regard to China he feels secure in taking charge of the situation by both controlling events and by influencing those involved—using both situation control and people control—whereas with Russia, Trump focuses more informally and behind the scenes in influencing what is happening. He is not direct and challenging. In both cases he is interested in a particular end but is willing to be more ingratiating and subtle in achieving his goal.

Interestingly when it comes to the US both Biden and Trump become advocates, salesmen out to achieve their ends. But Biden focuses more on controlling the situation and what is happening while Trump does both, influencing the situation and the people involved. And Biden is pushing a particular agenda while Trump is strategically trying to get others to buy an agenda through use of the media and interacting with those important to achieving his goals. Both are secure in the processes they have chosen.

Enriching OCA: Binary Role Theory and the Operational Codes of Biden and Trump

Stephen G. Walker

In the following analysis of the operational codes of President Joseph Biden and Donald Trump, the I1 and P1 beliefs of the U.S. presidents represent Self's (the USA's) *General Role* as Ego interacting first with a generalized Other as Alter. Then the analysis is disaggregated into a sample of Ego/Alter *Role Dyads* who represent the USA as Ego interacting with specific other states as Alters. The focus in the General Roles model is on the relative behavioral frequencies of cooperation (+) and conflict (-), which are the empirical basis for calculating the nature of the political universe (P1) as friendly or hostile and the general strategies (I1) of cooperation (+) or conflict (-) pursued by each agent. The Role Dyads model focuses on each president's I1 and P1 beliefs regarding specific pairs of U.S.-Alter dyads.

Binary role theory is a binary theory because its key variables are modeled as binary values to represent roles as constituted from asymmetrical (\neq) or symmetrical ($=$) power, conflict (-) or cooperation (+) behavior, and vital (-) or secondary (+) national interests. These variables specify PIN models of Power, Identity, and National interests, which collectively constitute an agent's operational code of cooperation or conflict roles. In turn, binary role theory hypothesizes that these models generate over time the emergence of symmetrical or asymmetrical exercises of social power between Ego and Alter regarding secondary or vital interests. Binary role theory conceptualizes these patterns as games of strategic interaction (Schafer & Walker, 2021).

The Verbs-In-Context System (VICS) indices for the I1 and P1 beliefs are simple percentage differences between the positive (+) and negative (-) valences of each variable, which can range from -1.0 to +1.0. They measure each agent's cognitive operational code for the exercise of

social power, depending on whether the positive (+) or negative (-) valences represent an agent's cognitive beliefs regarding the exercise of social power by Self and Other as positive (appeal/support, promise, reward) or negative (oppose/reject, threaten, punish) sanctions. They represent the operational code of general or dyadic role enactment propensities regarding the exercise of power (cooperation or conflict) roles by an agent in world politics for a specified period of time (Schafer & Walker, 2006; Walker, Malici, & Schafer, 2011; Malici & Walker, 2017).

Biden Role Analysis. The period of time for President Joseph Biden in the following analysis is bounded by a sample of his public statements beginning 2/05/2007 and ending 9/30/2023 from the TALID data set. This information for Biden is arrayed in Figure 40, which shows the coordinates of the P1 Nature of the Political Universe (0.47mean, 0.24 sd) and I1 Approach to Strategy (0.59 mean, 0.22 sd) indices for his General Role model toward selected states and also the coordinates for this sample of Role Dyads. The graph locates the Role Dyad models higher or lower than Biden's General Role location, indicating the roles for Ego and Alter within a different sector defined as inside or outside one standard deviation above or below Biden's location on each axis of the (I1, P1) graph. Depending on Biden's overall I1, P1 coordinates, the location of the role dyads identify their respective ego and alter roles as enemy, rival, partner, or friend. Means and standard deviations for I1 and P1 are indicated by the dashed lines in Figure 40.

Figure 40: Biden’s Role Dyads for Countries with at least 200 observations.



The two indices are a combined index of these roles, which indicate intersecting choices and outcomes of cooperation or conflict ranked from highest (4) to lowest (1) as preferences within a 2 x 2 game matrix. Their intersection generates games between the two players with outcomes of mutual cooperation (+,+), mutual conflict (-,-), domination (-,+), or submission (+,-) between the USA as Ego and Other as Alter. These games represent the general strategies and outcomes constructed from the patterns in Biden’s General Roles model and specify the central tendencies about the roles of Ego and Alter for Role Dyads models inferred from the indices for I1 and P1. These “average” general games constitute abstract models of world politics and may or may not represent a concrete game actually generated by collisions between the pairs of two agents in the graph. However, these Self-in-Situation cognitive models constitute a “first cut” of likely interaction patterns from collisions between two agents in world politics and represent dyadic roles for the USA and Other as two agents in Biden’s worldview.

The games for individual role dyads in this universe are in Figure 42. Myopic equilibrium solutions in each game are asterisked; they are cells from which neither player can move without immediately leading to a worse (or at least not a better) outcome in the adjacent cell (Brams,

1994, p. 244). The nonmyopic equilibrium solutions for these games are underlined; they can also vary within four of the six games, depending on which cell is the “initial state” beginning the game and which player has the next move (Brams, 1994; Aumann, 1989).

	+ Ene –		+ Riv –		+ Riv –
+	<u>3,3</u>	1,4	+	<u>3,3*</u>	1,2
Ene			Riv		Par
–	4,1	<u>2,2*</u>	–	2,1	<u>4,4*</u>
	USA-RUS		USA-CHN		USA-UKR
	USA-IRA		USA-AFG		
	USA-IRQ				
	+ Par –		+ Fri –		+ Fri –
+	<u>4,4*</u>	1,2	+	<u>4,2*</u>	2,1
Par			Par		Fri
–	2,1	<u>3,3*</u>	–	1,4	<u>3,3</u>
	USA-CAN		USA-IND		USA-JAP
	USA-MEX		USA-AUS		USA-ROK
	USA-ISR				

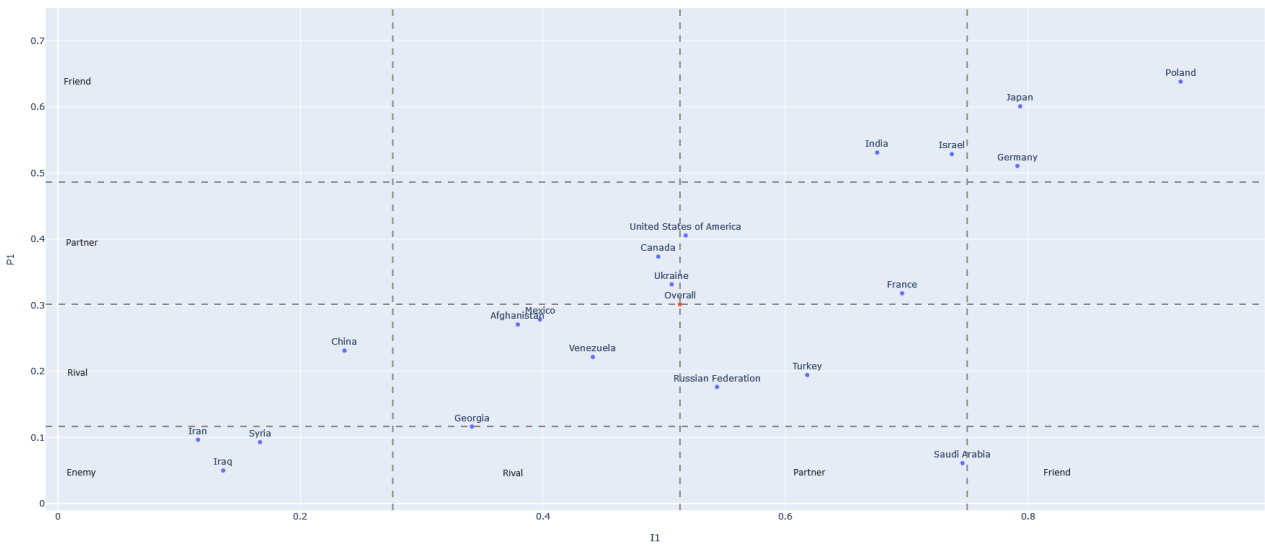
Figure 41: Biden’s Role Games in US-Alter Role Dyads.*

*Row Player: Ego (USA); Column Player: Alter (Other). Enemy: Ene; Rival: Riv; Partner: Par; Friend: Fri. Cooperate (+); Conflict (–). Row, Column outcomes (cells) are ranked from highest (4) to lowest (1) for each player. Nonmyopic equilibrium solutions are underlined while myopic equilibrium solutions are asterisked.

The results of the analysis in Figure 41 show that Biden’s cognitive operational code for this sample of the political universe has a variety of role dyads, in which the USA enacts the different general roles of enemy, rival, partner, and friend. These roles are reciprocated by the other member of each role dyad in about three fourths of the cases (10 out of 13 dyads). This set of dyads has the USA enacting dyadic roles of mutual partners (3) and mutual friends (2) versus an equal number of mutual enemies (3) and mutual rivals (2). The prospect of mutual general cooperation as a nonmyopic equilibrium between the USA as Ego and the various Alters is possible in 11 out of the 13 role dyads with China and Afghanistan as exceptions.

Trump Role Analysis. The period of time for President Donald Trump’s TALID sample is bounded by his public statements beginning 6/15/2015 and ending 9/30/2023. This information for Trump is arrayed in Figure 3, which shows the coordinates of the P1 Nature of the Political Universe (0.30 mean, 0.18 sd) and I1 Approach to Strategy (0.51 mean, 0.23 sd) indices for his General Role toward these states and also the coordinates for this sample of Role Dyads. The graph locates each Role Dyad above or below Trump’s General Role location, indicating the roles for Ego and Alter within a different sector defined as inside or outside one standard deviation higher or lower than Trump’s mean location on each axis of the (I1, P1) graph. Depending on their I1, P1 coordinates, the locations of the role dyads identify their respective roles as enemy, rival, partner, or friend. Means and standard deviations for I1 and P1 are indicated by the dashed lines in Figure 42.

Figure 42: Trump’s role dyads for countries with at least 200 observations.



The two indices are a combined index of these roles, which indicate intersecting choices and outcomes of cooperation or conflict ranked from highest (4) to lowest (1) as preferences. Their intersection generates games between the two players with outcomes of mutual cooperation

(+,+), mutual conflict (-,-), domination (-,+) or submission (+,-) between the USA as Ego) and Other as Alter. These games represent the general strategies and outcomes constructed from the patterns in Trump’s General Role model and specify the central tendencies for the dyadic roles of Ego and Alter inferred from the I1 and P1 indices. These “average” dyadic games constitute abstract models of world politics and may or may not represent a concrete game actually generated by collisions between pairs of two agents in the graph. However, these Self-in-Situation cognitive models constitute a “first cut” of the likely interaction patterns from collisions between two agents in world politics and represent dyadic roles for the USA and Other as two agents in Trump’s worldview.

	+ Ene –	+ Riv –	+ Riv –	+ Par –
+ Ene	+ <u>3,3</u> 1,4	+ <u>3,3</u> 1,2	+ 3,3* 1,2	+ <u>3,4*</u> 1,2
– Ene	– 4,1 <u>2,2*</u>	– 4,1 <u>2,4*</u>	– 2,1 <u>4,4*</u>	– 2,1 <u>4,3*</u>
	USA-SYR	USA-CHN	USA-MEX	USA -UKR
	USA-IRA		USA-VEN	
	USA- IRQ		USA-AFG	
			USA-GEO	
	+ Riv –	+ Par –	+ Fri –	+ Fri –
+ Par	+ <u>4,3*</u> 1,2	+ <u>4,4*</u> 1,2	+ <u>4,2*</u> 2,1	+ <u>2,2*</u> 4,1
– Par	– 2,1 <u>3,4*</u>	– 2,1 <u>3,3*</u>	– 1,4 <u>3,3</u>	– 1,4 <u>3,3</u>
	USA-RUS	USA-CAN	USA-IND	USA-JAP
	USA-TUR	USA-FRA	USA-ISR	USA-GER
				USA-POL

Figure 43: Trump’s Role Games in US-Alter Role Dyads.*

*Row Player: Ego (USA); Column Player: Alter (Other). Enemy: Ene; Rival: Riv; Partner: Par; Friend: Fri. Cooperate (+); Conflict. Row, Column outcomes (cells) are ranked from highest (4) to lowest (1) for each player. Nonmyopic equilibrium solutions are underlined while myopic equilibrium solutions are asterisked.

The games for individual role dyads in this universe are in Figure 43. Myopic equilibrium solutions in each game are asterisked; they are cells from which neither player can move without immediately leading to a worse (or at least not a better) outcome in the adjacent cell (Brams,

1994, p. 224). The nonmyopic equilibrium solutions for each of these games are underlined; they can also vary within seven of the eight games, depending on which cell is the “initial state” beginning the game and which player has the next move (Brams, 1994; Aumann, 1989).

The results of the analysis in Figure 43 show that Trump’s cognitive operational code for this sample of the political universe has a variety of role dyads, in which the USA enacts the different general roles of enemy, rival, partner, and friend. These roles are reciprocated by the other member of each role dyad in two thirds of the cases (12 out of 18 dyads). Overall, this set of dyads has the USA enacting general roles of mutual rivals (4) and mutual enemies (3) more frequently than mutual partners (2) and mutual friends (3). The prospect for mutual general cooperation as a nonmyopic equilibrium between the USA as Ego and the various Alters is there in 14 out of the 18 role dyads. Mexico, Afghanistan, Venezuela, and Georgia are the exceptions.

The role dyad games for both Biden and Trump can be refined further with additional information supplied by a third VICS index (P-4) Control over Historical Development. Binary role theory hypothesizes that the distribution of historical control (P-4) as an aspect of the distribution of social power between Ego and Alter can vary and is set as equal (=) in this paper. It specifies the rank order of the remaining outcomes in addition to the highest ranked outcome shared by each role as a friend, partner, rival, or enemy (Walker S. G., 2013; Malici & Walker, 2017; Walker & Malici., 2021). Varying this additional theoretical dimension would narrow the first approximation offered by general games for role dyads to specify even more concretely relations between agents located in different positions in space and time. Finally, operational code analysis can also identify the games actually enacted by each agent once a temporal sequence of behavioral interaction patterns is also supplied as information by event data (Schafer and Walker 2006; Walker, Malici, and Schafer 2011; Malici and Walker 2017, 2021).

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